**IN THE CLAIMS:**

Please amend the claims to read as follows:

Claim 1 (Original): A production plan devising system for formulating a production plan by means of simulating movement of a product in a factory by an event-based simulator through use of a production process model and a production rule, the production plan devising system comprising:

a time-interval-based simulator for computing the status of a production process at given time intervals; and

a rule generator for automatically deriving the production rule through use of the time-interval-based simulator.

Claim 2 (Original): The production plan devising system according to claim 1, wherein the production rule is formulated by means of a machine learning method based on a consecutive optimization technique using an artificial intelligence technique.

Claim 3 (Original): The production plan devising system according to claim 1, wherein the rule generator is constituted by a neural network.

Claim 4 (Currently Amended): A production plan devising method for formulating a production plan by means of simulating movement of a product in a factory by an event-based simulator through use of a production process model and a production rule, the production plan devising method employing [[:]] a time-interval-based simulator for computing the status of a production process at given time intervals[[;]] and a rule generator for automatically deriving the production rule through use of the time-interval-based simulator, the production plan devising method comprising:

a step for repeatedly devising a production plan over and over again by the time-interval-based simulator[[,]];

a step for applying mechanical learning based on a consecutive optimization technique to the rule generator[[,]];

a step for automatically formulating the production rule[[,]];

a step for using a generated production rule by the event-based simulator[[,]]; and

a step for formulating a production rule.

Claim 5 (Original): A production plan devising program for formulating a production plan by means of simulating movement of a product in a factory by an event-based simulator through use of a production process model and a production rule, the production plan devising program comprising:

a time-interval-based simulator for computing the status of a production process at given time intervals; and

a rule generator for automatically deriving the production rule through use of the time-interval-based simulator,

wherein there are performed procedures by means of which the time-interval-based simulator repeatedly devises a production plan over and over again, thereby applying mechanical learning based on a consecutive optimization technique to the rule generator, so that the production rule is automatically formulated and the event-based simulator uses a generated production rule, thereby formulating a production rule.

Claim 6 (Original): A production system comprising:

a simulator for repeatedly computing the amount of WIP in manufacturing processes; and

a control system which determines a parameter to be used in computation of the simulator such that a computation result of the simulator becomes equal to an allowable range or less, and which controls the manufacturing processes on the basis of the parameter.

Claim 7 (Original): The production system according to claim 6, wherein the simulator comprises: a time-interval-based simulator for computing the status of a production process at given time intervals, and a rule generator for automatically deriving the production rule through use of the time-interval-based simulator, and the simulator repeatedly computes the quantity of WIP in manufacturing processes through use of a production rule generated by the generator.

Claim 8 (Original): The production system according to claim 6, wherein the control system has measurement equipment for measuring the amount of actual WIP in manufacturing processes; and, when the amount of actual WIP measured by the measurement equipment within a given cycle has become equal to a computation result of the simulator, the control system suspends production in manufacturing processes and resumes production in the next cycle.

Claim 9 (Original): The production system according to claim 8, wherein the given cycle can be variably set.

Claim 10 (Original): A production method comprising:

a step for repeatedly computing the amount of WIP in manufacturing processes by means of a simulator;

a step for determining a parameter to be used in computation of the simulator such that a computation result of the simulator becomes equal to an allowable range or less; and

a step for controlling the manufacturing processes by a control system on the basis of the parameter.

Claim 11 (Original): The production method according to claim 10, wherein the simulator comprises: a time-interval-based simulator for computing the status of a production process at given time intervals and a rule generator for automatically deriving the production rule through use of the time-interval-based simulator, and the simulator repeatedly computes the quantity of WIP in manufacturing processes through use of a production rule generated by the generator.

Claim 12 (Original): The production method according to claim 10, wherein the control system has measurement equipment for measuring the amount of actual WIP in manufacturing processes; and, when the amount of actual WIP measured by the measurement equipment within a given cycle has become equal to a computation result of the simulator, the control system suspends production in manufacturing processes and resumes production in the next cycle.

Claim 13 (Original): The production method according to claim 12, wherein the given cycle can be variably set.

Claim 14 (Original): A program to be performed by a production system, the program comprising:

a step for repeatedly computing the amount of WIP in manufacturing processes;

a step for determining a parameter to be used in computation of the simulator such that a computation result of the simulator becomes equal to an allowable range or less; and

a step for controlling the manufacturing processes on the basis of the parameter.

Claim 15 (Original): The program according to claim 14, wherein the production system comprises: a time-interval-based simulator for computing the status of a production process at given time intervals, and a rule generator for automatically deriving the production rule through use of the time-interval-based simulator, and the simulator performs processing pertaining to a step of repeatedly computing the quantity of WIP in manufacturing processes through use of a production rule generated by the generator.

Claim 16 (Original): The program according to claim 14, wherein the control system has measurement equipment for measuring the amount of actual WIP in manufacturing processes; and, when the amount of actual WIP measured by the measurement equipment within a given cycle has become equal to a computation result of the simulator, the control system suspends production in manufacturing processes and resumes production in the next cycle.

Claim 17 (Original): The production method according to claim 16, wherein the given cycle can be variably set.

Claim 18 (Currently Amended): A recording medium on which the program defined in ~~any one of claims~~ claim 14 ~~to 17~~ is recorded.